

Tagger: A Web Based GIS Solution to Capturing Everyday "Fuzzy" Geography

Tim waters
waters_tim@hotmail.com

Dr Andy Evans
University of Leeds
geoaje@leeds.ac.uk

Introduction

Developed three GIS tools to help capture everyday geography.

The way we perceive areas affects most of our day-to-day activities.

The areas don't usually represent discrete points or polygons, but are often "fuzzy" – with vague boundaries and variations within

Three tools were made:

9. User input tool: The user is given a spray can tool, to define fuzzy areas on a map. Attribute info can be tagged to the area.

10. Storage and weighting tool: aggregates results from multiple users and stores individual areas and attributes.

11. Querying tool: represents all users' aggregate data and searching for comments ranked according to perceived importance.

Why?

People:
Go to the shops for lunch
Avoid the bad bit of town
Move to the suburbs

No clear geographical idea of where these areas are!

Datasets people use are continuous and discrete at differing scales, historical, architectural, temporal and mythological.

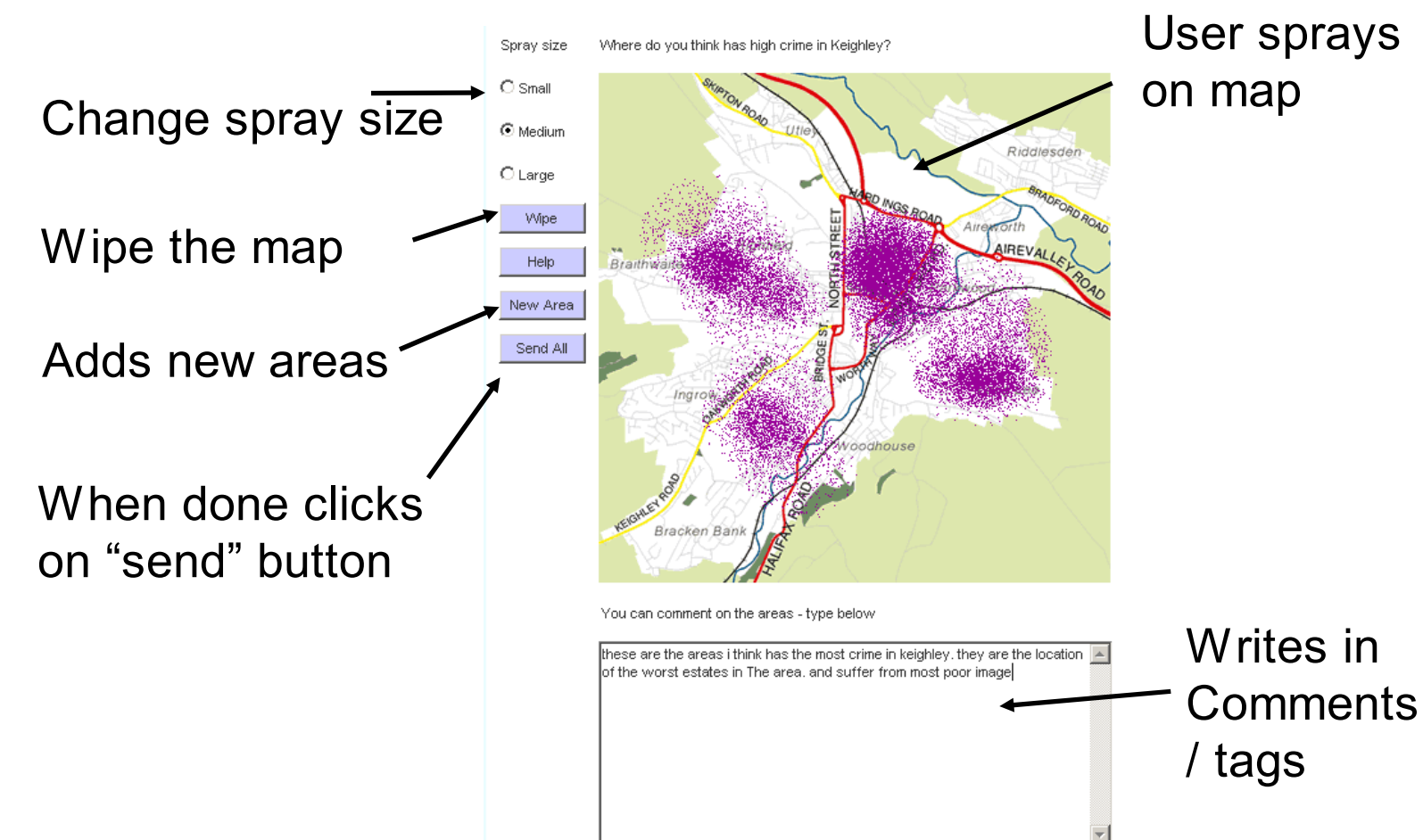
Areas are linguistically ambiguous ("the inner city")
Areas may be bound by landscape (I.e. "within the ring-road") but more usually diffuse.
Often different levels of intensity with the areas
Differences between people & their personalities.

Points and polygons are great for clearly defined areas, but for this type of geography? How about spraying on a map.

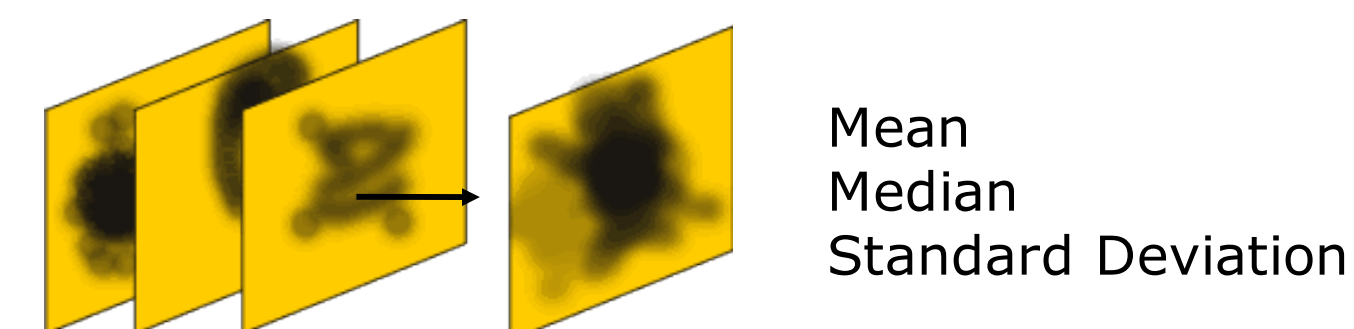
By spraying, users can control the spread, boundary, internal variances and intensities. They can also add textual attribute information, or tag the areas. Its also very intuitive and easy to use.

Tools

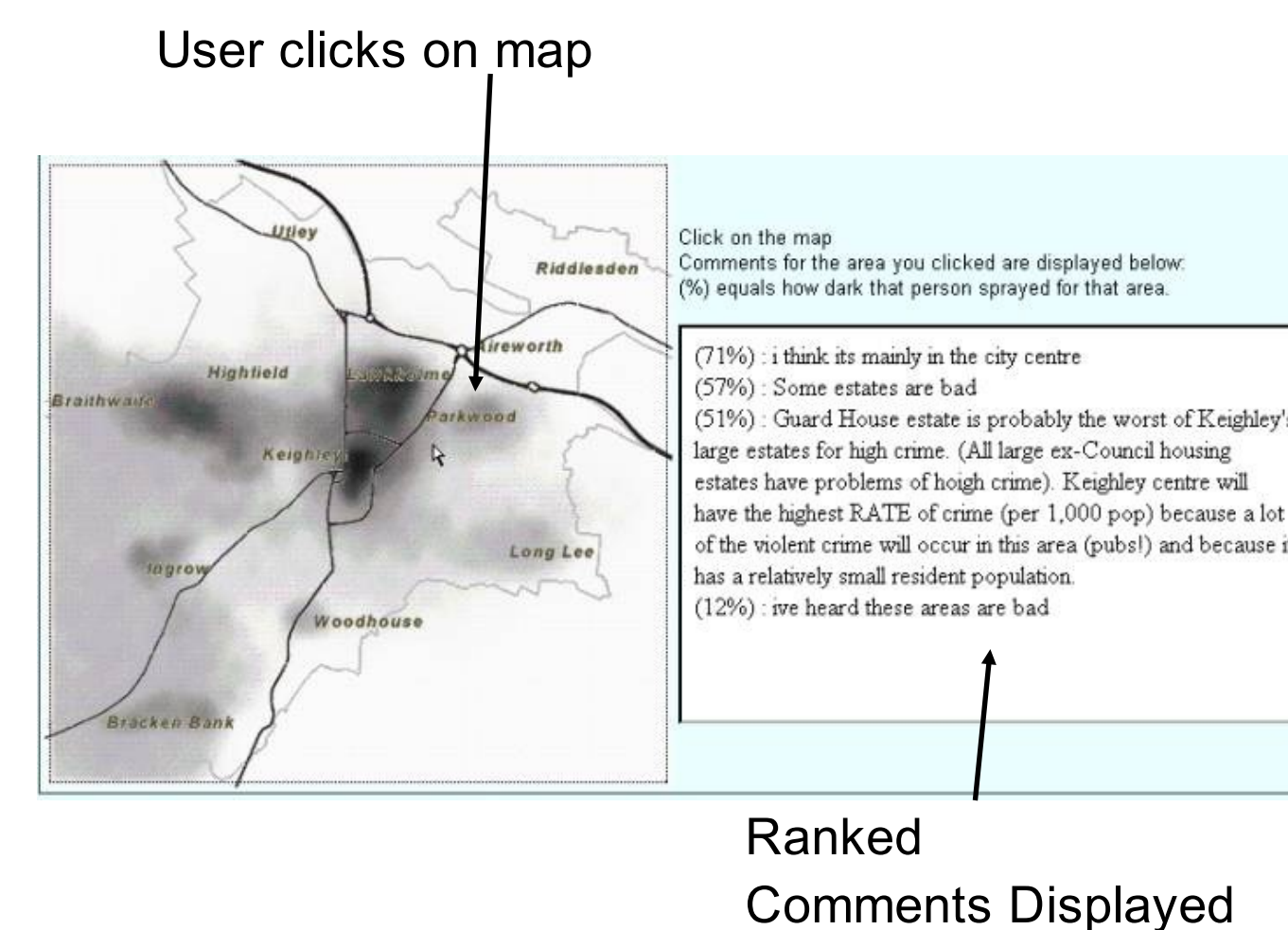
1. Input



2. Storage & Weighting



3. Query



Architecture

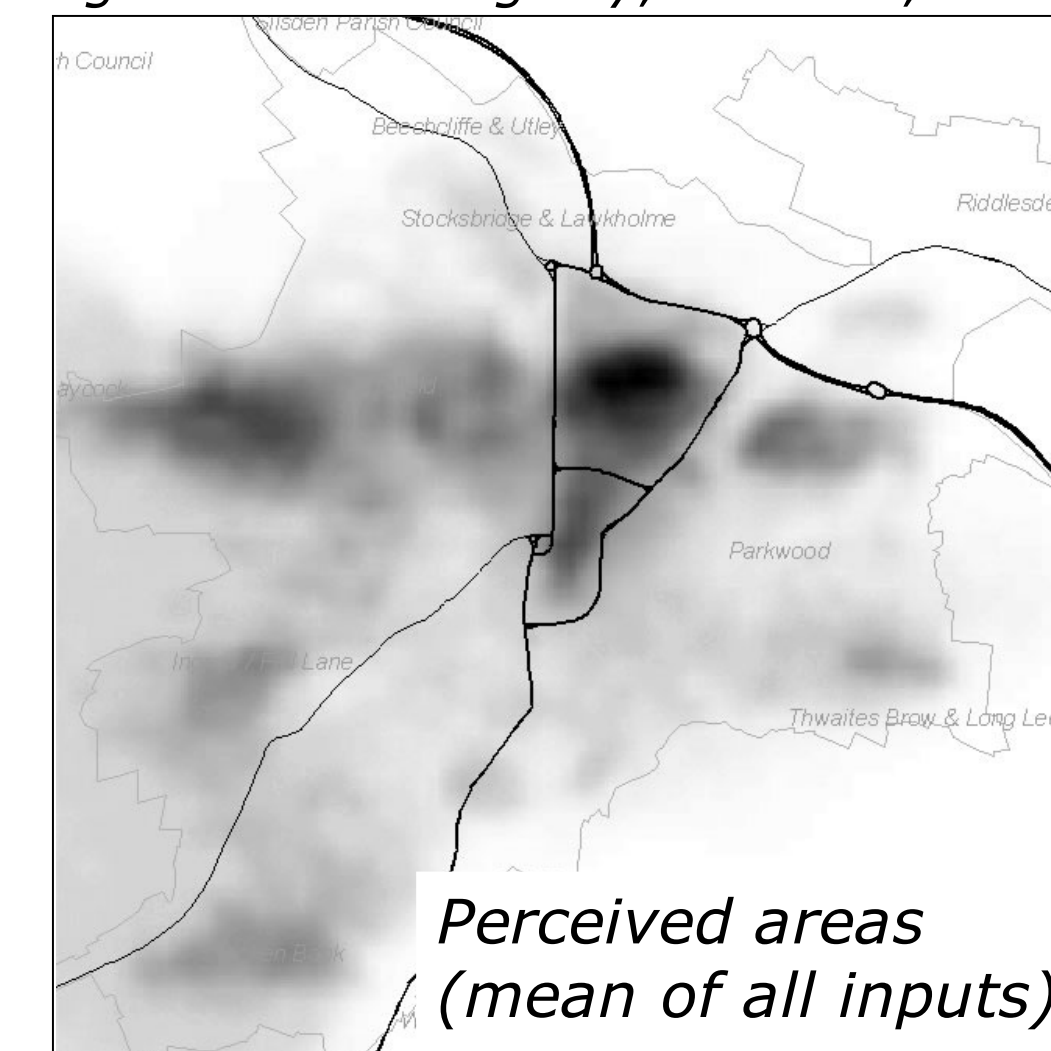
2 flavours:

Java J2EE Servlet and thin client Applet
Servlet - query, storage, admin, moderating.
Applet used for input.

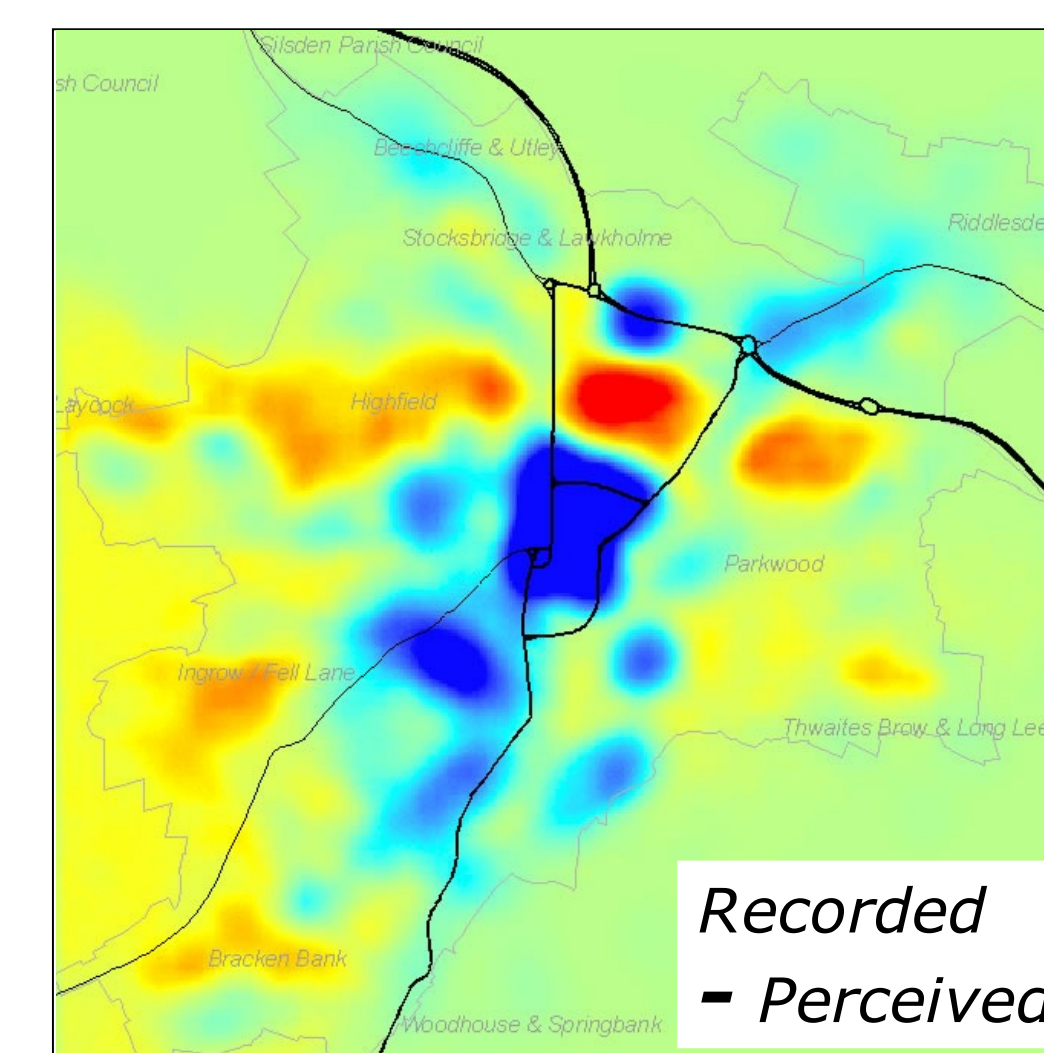
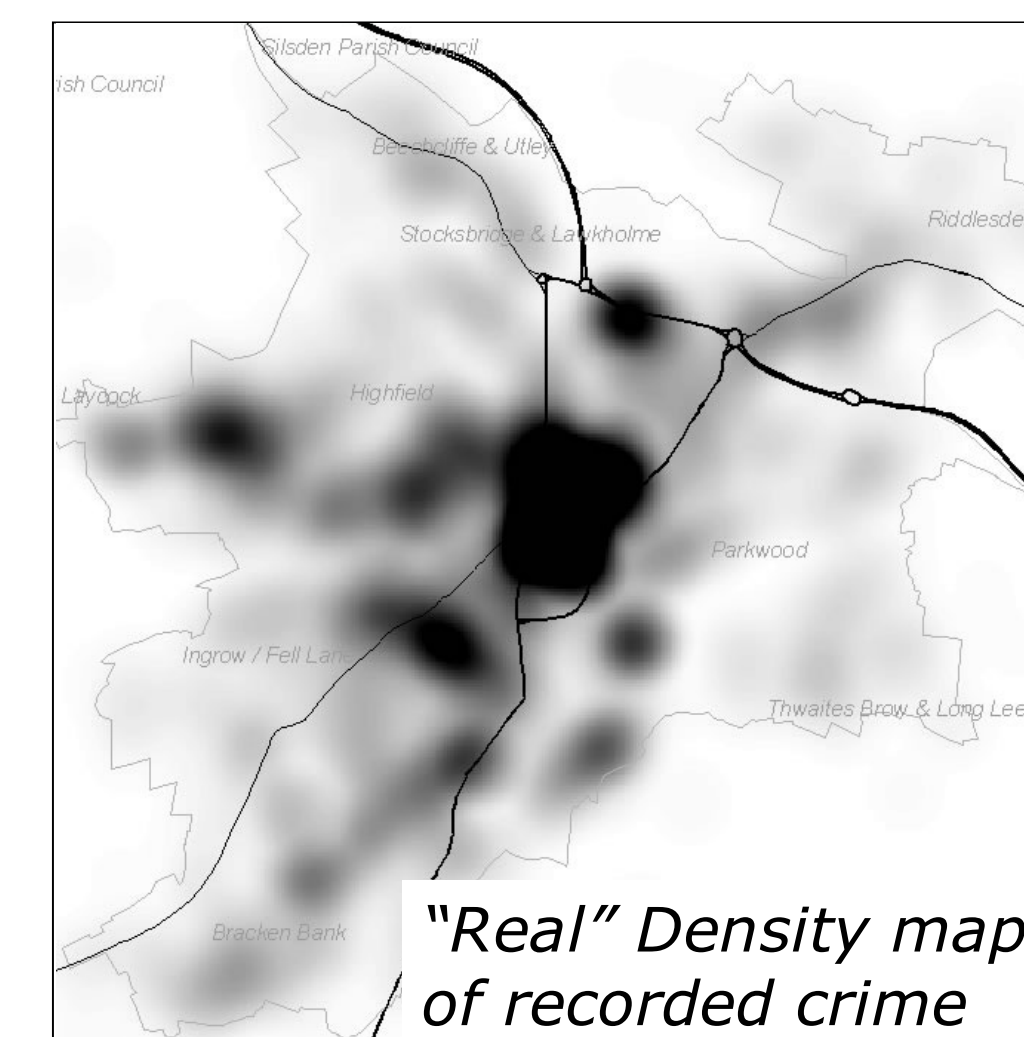
Perl Server side scripts and heavy client Applet
Applet used for input, query and admin

Case Study

24 people asked where they thought had High crime in Keighley, W.Yorks, UK



Comments included:
"Anti social behaviour around the station and shops"
"These area elected the BNP "
"Town centre is worst."



Some areas perception matched reality.
Blue = more crime than perceived
Red = more perceived crime than reality

Discussion

Case study can tell us:

Where do people have misperceptions as to the level of risk from crime?" (If areas don't match)
"what level of crime do people notice as high?"
What areas (don't) have a bad reputation?

For users:

"How scared of crime are my neighbours"
"Does anyone else feel the same way as me"

For policy: If perception = high and reality = high then investment = high

Future

Zooming, panning etc Integration with other GIS

Basis for development of a new geography based on behaviour, rather than reality. People's behaviours are based on their perceptions.

Try it out @ Foss4g

"Which areas are nicer?"

DemoFest or

<http://tinyurl.com/mwxfm>



Bradford District Council

www.bradford.gov.uk